THE LIGHT.

"Open the window, Mother dear,
And let me breathe the fragrant air
That blows in from the garden where
The flowers bloom. And let me hear
The chorus of the birds that sing
Within the trees, for it will bring
To my faint heart a little cheer.
Please, Mother dear—
It seems so close and hot in here."

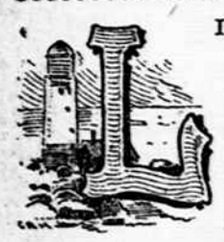
She raised the window. Full and free
The sun-kissed air came streaming in
Upon his face so pale and thin;
The song of birds—in rapturous glee—
Fell on his ear. He smiled, and then
The eyelids closed; he slept again,
The mother holding tenderly
The outstretched hand,
For well she seemed to understand.

"Open the shutter, Mother dear,
It's growing dark—I cannot see.
Let in the light—sit close to me,
That I may feel your presence near.
Let in the sunlight from the sky—
The light that's pure and free, that I
May see your face again. Bend near—
Ah, there's the light!
Good-bye, dear mother—good—good-night."

The light had come—the radiant light
Of angels bending o'er him low,
The light which but the dead can know,
Which guides the soul upon its flight
To that far land of peace and rest;
The Heavenly light which, last and best,
Illumines through the darkest night.
—James C. Challiss, in Independent.

THE WRONG CUE.

BY EMILY LENNOX.



ILA WEIR taught elocution at Madame Thouron's Young Ladies' Seminary when Thorndyck Farrington was cashier of the First National Bank.

Lila was both young and pretty, and, as the bank was just around the corner from the seminary, it often happened that Mr. Farrington walked home from school with her, to the undisguised chagrin of her lover, John Cunningham.

He met them one afternoon in February, slipping along over the icy pavement, and talking gaily together.

John had gone out of his way on purpose to walk home with Lila, but came too late; and, when he met her, half a block from the seminary, leaning on Farrington's arm, he passed on with a bow that was very stiff and formal.

"Confound the fellow!" he muttered, as he glanced back at Farrington's stylish figure. "What does Lila mean by letting him dance attendance on her every day?"

The cashier of the First National wore on this occasion a handsome brown chinchilla overcoat and a stylish Derby hat. In one hand he carried a cane with a head of beaten silver.

"The fool!" John muttered, with more force than elegance; but Mr. Thorndyck Farrington was just then oblivious to epithets.

When John called that evening, Lila knew in a minute that he was out of sorts.

"See here, my little girl," he said, soberly, "I wish you wouldn't let that fellow, Farrington, walk home with you so much."

"Now, John, don't be silly!"

"I don't like him, Lila. Besides, I wouldn't want any man to walk home with you as much as he does."

"Well, John Cunningham, if you aren't perfectly absurd!"

"I don't think I am," he said, flushing deeply. "Some one asked me this morning why I'd let that fool of a Farrington cut me out. I don't like such innuendoes, Lila."

"What perfect nonsense, John!"

"Nonsense or not, I don't like it!" he said, with some spirit. "Lila, I am going away to-morrow, and I want you to promise me that you won't allow Farrington to walk home with you any more."

"You are going away to-morrow, John!" she echoed. "To Washington?"

"Yes," he said, slipping his arm around her. "I am going to-morrow, darling!—to be gone two months, perhaps. But if I succeed in this undertaking, Lila, there will be an end to all this weary waiting, and we can be married at once!"

"Humph!" she said, saucily. "It takes two to make a bargain."

"Yes—but we two are one! Don't trifle with me, Lila. I can't bear it. This hope lies too near my heart."

"I did not mean to trifle, John."

"I don't think you ever mean to hurt me," he said, gravely; "but sometimes you do. I know I am jealous, Lila, but I can't help it. It is all in vain that I strive against it, and when I think of that fellow Farrington, I—it makes me wretched!"

"But what can I do, John? I can't insult the man by telling him he can't walk with me."

"Your woman's wit will serve you, Lila. I never saw a girl yet that couldn't get rid of an admirer, if she saw fit."

"But suppose I don't want to get rid of him?"

"Lila!"

"Well, John? I think you might trust me more."

"I do trust you. But I tell you it makes me unhappy to see you with that fellow, and I think that ought to be sufficient!"

"I suppose I might go home the back way," she said, musingly.

"If you did several times, he would soon see that you were trying to avoid him."

"But, John, the back way is horrid!"

He took her pretty, perverse little face between his hands, and lifted it so that he could look right down into her eyes.

"Darling," he said, softly, "do it just to please me."

"Well, I will! But you're a perfect tyrant, John Cunningham!"

"And you are an angel!" he cried, rapturously. "Lila, you shall never regret the little things you do to please me. They make me love you all the more."

John went to Washington the following morning. Two weeks dragged themselves away, and then something unexpected happened to shorten his sojourn in Washington. His purpose was accomplished with less difficulty than he had anticipated, and in full realization of his fond hopes, he hurried back to Lila.

He had not written her, because he wanted to take her by surprise, and she never dreamed of his coming.

It was rather late one evening when he ran up the steps and pulled the bell.

There was a bright light in the parlor, and John leaned over to peep through the lace curtains into the room.

"Pshaw!" he exclaimed, with much vexation as he saw a gentleman sitting with his back toward the window. "There's somebody there! I'll go right on up to the sitting-room."

The door was opened by a little colored girl, who was the only servant that the Weirs kept.

"Hush—sh!" John said, warningly, as he stepped into the hall. "Don't tell any one I am here, Katie."

The little girl retired under cover of a broad grin.

"I wonder who is in there!" John said, reflectively, as he stepped up to the hat-rack to identify the hat and overcoat that were hanging there.

There was a cane with a beaten-silver head lying across the top of the rack, and under it a brown overcoat hanging beside a Derby hat.

John's face changed its expression, as he took down the hat, and saw inside of it an embroidered band marked, "T. W. F."

"Thorndyck Farrington!" he muttered, with quick resentment, and just then he heard Lila's voice raised to a key somewhat higher than ordinary.

"John is so fearfully jealous!" she said. "I don't know what to do with him!"

"Why do you put up with it?" was the query, in a lower tone. "I cannot bear to see you subject to the will of such a man, darling. I wish you would let me put a stop to it!"

"I am going to write to him myself," said Lila. "I can't stand it any longer. I have fully made up my mind to break off our engagement."

John heard this; but he heard no more. The floor seemed to heave like the waves of the ocean; the light in the hall grew suddenly dim, and he gasped for breath.

His first instinct was to get out of the house. He staggered toward the door, and down the steps, like a drunken man.

"What was that?" Lila exclaimed, as she heard the front door bang.

She started up and peeped out into the hall, but no one was visible.

"I guess it was the wind," she observed, as she went back to her seat; and John's brief visit was not discovered.

But the next day there came to her a note, saying:

I take this opportunity of releasing you from an engagement which has grown irksome to you. You are free to favor whom you will, Mr. Thorndyck Farrington not excepted. May you have more happiness than you deserve! I do not fancy the role of hoodwinked husband. Thank heaven I found you out before it was too late.

JOHN CUNNINGHAM.

In the afternoon John was sitting in his office, trying to make up his mind whether he would go to Panama or Alaska; all he knew was that he could not stay where he was.

As he sat there, with his dull gaze fixed upon the floor, Harry Weir came in, looking flushed and indignant.

"See her, Cunningham!" he said, laying his right hand roughly on John's shoulder, "what the deuce do you mean by acting in this way. What right had you to send such a note to Lila?"

John struggled to his feet, and threw off Harry's hand.

"Because," he said, bitterly, "your sister is a heartless, unprincipled flirt!"

"You're a liar!" Harry cried, hotly, and with one stout blow he sent John staggering back over the chair, which fell to the floor with a crash, and John on top of it.

With one faint cry that was half a groan, John fell back in a limp, senseless heap upon the floor.

As Harry saw John lying there, white and unconscious, his anger gave way to horror.

"Great heavens," he cried, falling on his knees at John's side, "I have killed him!"

Half frantic at his own violence, he summoned aid, and John Cunningham was taken home, not dead, but seriously injured.

Harry told a straight story, and the law had its course. He was placed under arrest, to await the result of John's injuries.

From the prison he wrote a note to his sister.

"Dear Lila," he said, "I did not obey your injunction, for I could not keep my hands off Cunningham. The thought of you made me forget your earnest prayer that I would not molest him. I knocked him down, and I fear he is fatally injured. Forgive me, and break this to mother as gently as you can."

Half an hour after this note reached her, Lila left the house with a face that was white as death, and eyes that were shadowed by dark despair.

It was not to her brother in prison that she went first, but to John Cunningham who lay back upon a bank of pillows, pale and suffering.

"Is he going to die?" Lila asked, with ashen lips, as the doctor passed her in the hall.

"No," the doctor answered, gravely; "but his back—"

"Broken?" she gasped.

"No, not so bad as that; but it's an ugly sprain. It may be months—"

Lila heard no more. She had dashed past, and was kneeling down beside her lover's bed.

"John, John!" she sobbed. "I am so sorry!"

As he opened his eyes a slight spasm crossed his face.

Against his will the look of love came back, and he murmured:

"Lila!"

Her arms were about him in an instant.

"John, dear!" she cried, burying her face in the pillows, while she shook with convulsive sobs, "you did not mean it, did you?"

"Did you mean it, Lila?" he said, gravely.

"Did I mean what?"

"What you said to Mr. Farrington last night. I was in the hall, Lila, and heard you."

"John, dear, you are certainly dreaming."

"No," he said, turning away his head, with a look of pain. "I meant to surprise you, and I slipped into the hall. I—I heard what you said about me. I saw Farrington's overcoat on the rack. Oh, Lila! why did you deceive me?"

"John," she said, impressively, "I do not understand a word of this!"

"Thorndyck Farrington called upon you last night, Lila."

"He did not!"

"I saw his cane and overcoat in the hall!"

"John!" she cried, with a sudden inspiration, "did that mislead you? That was his hat and overcoat. He and Harry went skating night before last, and Harry got into an air-hole. You have misjudged Thorndyck, John. He saved Harry's life, and because Harry was all wet he loaned my brother his hat and overcoat to wear home. As for the cane, he made Harry a present of that a week ago."

"Then he wasn't at your house last night?" John said, faintly.

"No; I have not seen him since you went away."

"But I heard you say—"

"What did you hear, John?"

"You said, 'John is so fearfully jealous. I don't know what to do with him!' You said more, too. I don't remember the words, only you declared that you were going to break off your engagement with me, and—"

A joyous laugh rippled from Lila's lips, but she checked it as she remembered John's condition.

"Dearest," she whispered, bending over him till her soft cheek pressed against his bearded one, "I was reading aloud. I will show you the book in which those very words occur. Harry took cold, in spite of all precautions, and the doctor ordered him to stay in the house. I amused him by reading aloud last night. You forgot that I was a teacher of elocution. Like Mr. Orator Puff, I have 'two tones to my voice.' One is up, so, the other down, so. Oh, John, dear John! Did you really think I was saying all that?"

"Of course I did!" he answered, tremulously, and then he folded his arms around her, while his tears wet her glossy hair.

"Darling," she said when she had let him hold her there in silence for a long, long time, "never doubt me again, no matter what happens."

"I never will," he answered, solemnly. "I ought to have gone right to you for an explanation. My jealous nature made me the easy victim of a mistake. Oh, Lila! If I had lost you by my own precipitancy!"

"What if I had lost you!" she said, with a shudder. "And Harry, through your death!"

"Thank God, there is no danger of that! I shall get well, the doctor says, and—and, Lila, I wish you would bring Thorndyck to see me."

Harry was discharged, of course, and at the end of two months, John was able to be about. Meanwhile, he changed his opinion of the cashier of the First National, whom he allowed to walk home with Lila whenever disposed to.

But it was not very long that Lila felt the need of an escort. She left Madame Thouron's in May, and in June she and John were married.

Harry Weir and Thorndyck Farrington were groomsmen at the wedding, and they do say that the latter is going to marry John's sister.

Snake Overcomes a Cow.

On a farm belonging to one of the townsmen of Starruca, Penn., a year ago since, a cow was noticed making repeated and furious charges at a dense thicket. An investigation by the owner of the animal showed that she was fighting a big blacksnake and trying to stamp it to death with her fore feet. The thicket was an isolated clump of laurels, and the snake did not seem disposed to leave it and trust its life in the open country.

Finally the cow lowered her head and attempted to impale the snake on her horns. In an instant the snake sprang on the cow's head and coiled itself about her horns. The cow was dazed for an instant and then set off on a run, occasionally kneeling to rub herself against the ground, but she was unable to rid herself of her enemy.

The cow seemed finally to realize that all her efforts were useless, and set off at a full gallop. The men on the farm made an effort to follow her and turn her back. When cornered she would charge everything in sight. Occasionally the snake would half twist itself and its head would play before the cow's eyes. On these occasions the poor animal would bellow with terror and go backward in an endeavor to escape from the snake. Finally the poor brute dropped from sheer exhaustion and panted out her life. The snake was immediately dispatched, and on being measured was found to be over six feet in length.—New York Press.

POPULAR SCIENCE.

Close connection is traced by H. Luggin between photo-voltaic currents set up in silver salts and the decompositions giving photographs.

Vaccination laws are not enforced in England. At Norwich, with a population of over 100,000, the vaccination officer's fees this year amounted to about $40; he receives fifty cents for each case.

The Silesia Verein Chemischer Fabriken, at Woischwitz, near Breslau, provides carbonic acid water for its employes during the summer. The families of the workmen are also supplied freely with this water.

In the streets of Portsmouth, England, each of 240 lamp posts is provided with both an arc and an incandescent lamp. It is designed to use the weaker light at hours when the other is not necessary and an automatic switch on each post enables the operator at the central station to extinguish instantly one set of lights and light the other set.

The number of minor planets known between Mars and Jupiter now considerably exceed 400, of which M. Charlois of Nice has discovered eighty-six, while Herr Palisa, the Austrian astronomer, has detected eighty-three. The magnitudes of the first 400 of these planets have just been tabulated by Herr G. Huber. All are telescopic, only two being brighter than the eighth magnitude, while the later discoveries—the second 200—nearly all are of the twelfth magnitude or smaller.

Timber used in mines is subject to decay from various causes, such as warm moist air, but the most serious cause, according to a paper by Mr. J. Bateman to the British Society of Mining Students, is the chemical action set up by the cotton mould fungus. This fungus is the white, fluffy material seen clinging to timber, especially in return air ways. Various methods of protecting the timber have been tried, such as trickling water over it constantly, steeping in brine, charring the surface and creosoting. The last is the most effective. The timber is placed in a wrought iron cylinder, the air is pumped out, and creosote is forced in to a pressure of 100 pounds per square inch. Pine fir, etc., absorb ten to eleven pounds of creosote per cubic foot and oak and other hard woods about six pounds.

It has long been a riddle to the entomologist to find out how moths, especially those of the larger varieties, escape from the tough cocoon which incloses them during the grub stage. Professor Oswald Leatter, a member of the London Entomological Society, has been studying the cocoon method of the moths, and in making his studies opened up the cocoons spun by the insects, and put the imagos into artificial silk bags, with an opening at the end. When the time arrived for the imago to apply his solvent, the liquid escaped into little glass tubes instead. Careful analysis was made of this, and it was found to be a pure solution of caustic potash. This discovery is a new one in entomology. Caustic potash will destroy the human skin, and it is at least passing curious that it should be distilled in an insect's mouth.

Ministers as Business Men.

The idea that clergymen are poor business men is pronounced false by ex-Postmaster-General Thomas L. James, now President of the Lincoln National Bank in this city. He says: "We have among our depositors a large number of clergymen, and I am free to say that they are the best business men that I have ever known. You ordinarily call a man who is intelligent, methodical and prompt a good business man. Our ministerial depositors are more than methodical and prompt. They are clever and sharp, especially in the keeping of accounts. I do not wish to make any exceptions in my general characterization of clergymen as good business men, but I will say that the Roman Catholic clergymen—those that I have met—are remarkably able business men. They seem to be especially trained that way. The average clergyman of any denomination, however, can hold his own with the average business man. A clergyman of the present day cannot afford to be slipshod or negligent in worldly affairs."—Church Economist.

Bible Condensed to One Inch.

An eccentric Londoner, Richard Webb, has completed a machine for microscopic writing. He asserts that with it he can write the entire contents of the Bible four times in a space one inch square. He has succeeded in writing the Lord's Prayer on glass in a space one-hundredth of an inch wide by one-fiftieth of an inch long, or about the size of the "period" at the end of this sentence.

Ten years ago Mr. Webb set to work to break all records for minute penmanship. He soon found that mechanical aid was necessary and devised a contrivance which diminished the scope without altering the character of the movements of the pen. The result is a marvel of mechanical skill.

The machine is operated by a handle resembling a pen, which is held in the hand and used as an ordinary pen. The motion given to this handle is transmitted through numerous wheels and levers until it operates the writing point, which is a diamond so small as to be invisible to the naked eye.

More Polar Expeditions.

Mr. Harmsworth, who defrayed the expenses of the Jackson expedition in Franz Josef land, has declared that he will send two ships to the Arctic regions next season, and keep an expedition in the Arctic regions until a complete map can be made of all the accessible parts of the North Polar world. The Jackson expedition has cost him $200,000.

Nesting Material.

When the nests are located in perfectly dry situations, there is nothing better for a foundation than that cheapest of material, dry earth. A little tobacco dust added never comes amiss. For the upper layer, lawn clippings, hay or straw, excelsior, or moss may be used. The least desirable of all these is hay, as the presence of small seeds constantly tempts the hens to scratch it from the nest. If the owner considers it too much trouble to wash the eggs which may be soiled, the slight precaution of keeping the nest clean and dry will add at least one-half to the attractiveness of his basket of eggs.—New England Homestead.

An Ideal Hedge Plant.

This is what Professor Massey of the North California Experiment Station calls the Citrus trifoliata. The belief is general that none of the tree oranges is hardy at the north, but, according to the professor, there are few places where this delicious orange is not completely hardy. He says

It passed through last winter in Michigan safely. Its compact dwarf habit makes this plant easy to keep in good shape without hard pruning. Its complete armament of the strongest and sharpest spines pointing in every direction makes it a better defense than even the honey locust. It makes no suckers and its roots spread but a short distance and are not exhaustive of a broad strip of soil, as the other plants used for farm hedges are. It bears a great profusion of the sweetest of orange flowers, and loads itself with little sour, seedy oranges, like limes, which ripen in October. When the entire hardiness of this plant is fully realized the question of the best hedge plant will, I think, be finally settled. The plants are now so cheap in the Southern nurseries that it will be easy for the experiment stations and individuals in the extreme north to test their hardiness.

To Prevent a Horse Kicking.

The illustration shows a device to be used where a horse kicks his stable companion. It is made from one-inch galvanized iron tubing. The two corners are screwed together with a re-

HOLDBACK IN STABLE.

turn coupler. Pins go through holes in the upper ends and are attached to the woodwork of the stall. A cord is fastened to the device for raising or lowering as required. When not in use it is raised and is well out of the way of everything. In use, it does not interfere at all with the animal's movements, except to prevent his being too free with his feet and legs.

To prevent thieves taking horses out of the stable place a bar of iron across the doorway, as shown in cut, one end (a) entering far enough through the doorpost to allow the other end (b) to fit into a socket. An iron key is put into a hole in the bar near (a) and padlocked there. These two devices are not patented and they are effective.—Orange Judd Farmer.

The Private Dairyman's Opportunity.

Creamery butter is the standard in the markets, because it is uniform and can be had in quantities sufficient to supply the retail trade, says F. W. Mossman, of Massachusetts. The creameryman, however, has his trials. The impossibility of overseeing the production and first handling of the milk is a serious difficulty, often causing a lower grade product. Unless a first-class buttermaker can be obtained, much loss will result in many ways.

It is because of these drawbacks that there is still an opportunity for expert private dairymen to make a butter far superior in quality to the average creamery product. There are people in almost every village and town who are glad to obtain for family use a strictly gilt-edged article at its true value. To a limited extent this demand has been met, but I am led to believe that the field is by no means fully occupied.

To succeed in this it will often be necessary to lay aside preconceived ideas. Tempering cream by the sense of feeling or determining acidity by taste, will not answer. Butter owes its good qualities very largely to its treatment in the ripening vat and only to a small degree to the worker.

The essential features of good butter making are, a pure, sweet cream of proper consistency ripened rather slowly at a temperature of 58 to 62 degrees, or a little higher with or without a starter. The acidity at churning time should not be far from 0.7 per cent., preferably under than over, though the writer has recently made a sample of butter which scored ninety-nine points in a possible one hundred from cream which at churning time showed 0.745 per cent.

Churning temperature is governed by the per cent. of butter fat and degree of ripeness of the cream, also the character of the herd and period of lactation. The temperature should be such that from thirty to sixty minutes is required for churning. Cream ought never to be churned when it breaks in from five to ten minutes, as such treatment is ruinous in point of quality and economy.

Excessive washing of butter is always at the expense of the flavor. If in just the right condition, it requires very little washing. Some prefer a washing of brine at a temperature of fifty-four to fifty-eight degrees. Good results are obtained in this way. The flavor is supposed to be removed in a less degree than by the use of pure water. Color and salt of the best quality are to be used in quantities to suit the trade. Working is important, i. e., it is important to do just as little of it as will answer the purpose of evenly incorporating the salt and removing moisture.

Strict cleanliness is to be rigidly observed with every implement and in every operation from beginning to end, not one day in seven only, but every day in the year so long as the business continues.—American Agriculturist.

Subsoiling Explained.

Testimony in favor of subsoiling, especially as an antidote to drought, keeps pouring in from almost every quarter. It should be clearly understood that good subsoiling does not mean turning down the surface soil and turning up the subsoil on top of it. That would do a good deal of harm. The crude material so brought up has not had enough air to prepare it as plant food, and may be in itself very deficient in some essential food elements.

To subsoil for best results, as little as possible of the surface soil should be turned under. It should, however, be clean-turned once and the layer below it well stirred to a greater or less depth, as is found practicable, and left so. The main interest and chief benefit of this sort of subsoiling is to open up the more or less impervious stratum that lies below the reach of ordinary plowing in such a way that by the action of air and moisture and frosts it may be brought into a condition that will enable it to hold the greatest quantity of moisture and at the same time permit the free circulation of air around the roots of the plant. In the growth of trees, for example, the repeated movement of the soil caused by the leverage of the roots under the action of the wind may be seen very much the same effect as results from subsoiling. There is no transposition of the different layers of the soil, only a loosening proportioned to the amount of wind power that is brought to bear on the branches and leaves of the tree. The decaying vegetable matter, a leading ingredient in the food of the tree, always stays on the surface and the small fibers of the roots come up to feed upon it. But another set of roots reaches down deeper and deeper, mainly to bring up moisture, without which as a diluting agent food cannot readily be made available. The work done by the leverage of the tree is of very much the same sort as is done by good subsoiling. What the tree keeps doing, it may be for centuries, subsoiling will do by one process for the plants which must produce their full growth and perfection in a single season.

There is a wide range in the character of soils and some soils are such a happy combination of sand and loam as to be readily pervious to both air and moisture. If there is excessive rainfall, it is slowly but surely drained off through the lower layers, and in protracted drought moisture comes back to the surface in the same way. But this combination is not common, and the leading advantage of subsoiling has been its power to protect crops from the effects of extreme and protracted droughts. It is the remarkable consensus of experience in this direction that emphasizes the importance of a fuller attention to the effect of subsoiling and the best way of doing it than it has ever before had.

The best season for subsoiling is evidently the fall; once stirred by the subsoil plow the moisture and frost together will reduce the soil so stirred to fine particles, through which the air and moisture and the roots to be benefited can freely pass. Some plants have in their roots much greater penetrating power than others, but subsoiling will do at one process and more effectually what is only partially and slowly done even by the most penetrating kind of roots.

The best way is to send round an ordinary plow and turn over an ordinary furrow at the ordinary depth, following in the same furrow with a subsoil plow of some sort that will stir a few inches of the next stratum of soil and leave it in the same position. An ordinary plow without the moldboard will do this fairly well.—New England Homestead.

American pottery was recently shipped to Liverpool and Edinburgh from Kokomo, Ind., the first sent from the United States to the British Isles.